

CoreSenses transforms its digital learning environment with Citrix for engaged delivery

CoreSenses is a learning specialist, helping to guide children requiring additional support through a tailored program based on the application of neuroscientific research. This approach is designed to strengthen cognitive functions and encourage self-directed learning outcomes. It works with individuals to expand their cognitive capabilities and empower a positive learning mindset.

The small CoreSenses team based in Sydney faced an immediate challenge to transform its on-site classroom facilities into an online learning platform overnight as the global health crisis unfolded.

CoreSenses needed to convert its existing learning infrastructure into a secure user-friendly platform that could maintain high interaction and supervision levels with students while providing direct engagement for every student. David Commisso, Director of Technology & Learning, was responsible for conceptualizing the innovative and flexible learning environment that would solve two immediate challenges. It had to deliver a remote learning environment that provided access to Windows applications from multiple devices. It needed to be user-friendly for teaching staff to both operate and support multiple classrooms, plus have the scalability to personalize the educational experience for each student in these separate classrooms at the same time.

“It was vital we created a remote work and learning environment in one. This would maintain our in-person learning experience, but in a secure, cloud-based platform. Our goal was to recreate the normal classroom experience in this online social network. For our Director of Learning, it was imperative that students felt they had a teacher in front of them – and one that could facilitate queries and support their learning journey. This is what drove our innovative approach to develop a live educational environment,” says Stephen Laird, Technical Consultant at Com-X.



Industry
Education

Location
Sydney, Australia

Citrix products

- [Citrix Virtual Apps and Desktops](#)
- [Citrix Gateway Enterprise](#)

Key Benefits

- Rapid creation of a unique virtual learning environment
- Simplify desktop delivery for 15 concurrent students per teacher, plus separate Zoom sessions from a single client device
- Deliver a secure, user-friendly digital workspace for special needs learning

Addressing virtual learning challenges

The CoreSenses team had rolled out the first phase of its online learning system to facilitate teaching via Zoom; however, it faced challenges when supporting the students individually across breakout rooms. There was also no ability to interact with individual students to address their needs without disturbing the entire virtual classroom. CoreSenses then trialed running multiple Windows desktops on laptop computers using an open-source hypervisor for separate Zoom breakout sessions. Usability and scalability challenges meant that it needed a new system that met its students' and teachers' needs.

It realized that it needed a scalable virtual environment that was less challenging to operate. It had to be robust enough to support keeping the students engaged and ensure teachers could reach students quickly at all times. CoreSenses turned to Citrix Solution Advisor - Silver Partner, Com-X, to solve these challenges with [Citrix Virtual Apps and Desktops](#) and [Citrix Gateway Enterprise](#).

Cloud migration and innovation

“Citrix Virtual Apps and Desktops technology was particularly relevant for CoreSenses. It was the ideal solution to address two urgent needs – the remote work for its staff, plus the virtual education system for its students. Citrix Virtual Apps and Desktops allows teachers and students to easily and securely access their applications and their data from any location,” says Laird.

“We invested significant time with CoreSenses to understand what’s involved in its teaching program for people with learning disabilities. The Com-X team learned the interaction between teachers and students must be easy and fluid, to keep classes on track. It’s not like the home schooling most families have experienced, where teachers set tasks and let students complete them independently. We configured Citrix Gateway Enterprise in a unique way that allows the CoreSenses teachers to run 15 concurrent Zoom breakout classrooms from their own Windows PC,” says Laird.

“It’s really something to see where you have 15 separate Zoom sessions, each with a single student, looking back at you on a big screen used by a CoreSenses teacher,” he adds. “But the magic of the Citrix Virtual Apps and Desktops technology means the teachers can quickly select and talk to an individual student without all the other sessions listening to and seeing the conversation.”

Com-X is a cloud-centric consultancy and it capitalized on CoreSenses' existing use of Amazon Web Services (AWS). It expanded and ruggedized the CoreSenses AWS Virtual Private Cloud and configured Citrix Virtual Apps and Desktops to provide Windows 10 themed desktops with webcams and virtual devices. It overlaid this with the Zoom VDI plugin for Citrix to provide two-way vivid graphics and crisp audio during Zoom breakout classrooms.

“Citrix technologies securely power our digital learning platform, delivering a highly friendly and flexible virtual workspace for our teachers and students. This new cloud-based deployment helps continued growth for our business.”

David Comisso
Director of Technology & Learning, CoreSenses

“CoreSenses is a small team whose focus is teaching students. We added automation to the system to reduce management overhead, and to keep AWS costs for the school minimized by turning off the pay as you go servers when they are not being used,” Laird explains.

“The customer experience is essential to us at Com-X. Being able to spin up a CoreSenses virtual education session on demand for students meant we could deliver on the company’s vision to support its students and its staff,” he continues.

Innovating the live education experience

CoreSenses invested in Citrix Virtual Apps and Desktops to connect teachers, students, and devices from any location. David Commisso redesigned the live education experience with three innovative components. Citrix Virtual Apps and Desktops provided the cloud-based interconnection, the client computer acted as the software controller, while a tablet-based app managed student communications and supervision. Students would share their screen with the teacher and keep their audio and camera on throughout the session – ensuring teachers could reach them at the press of a button.

Commisso explained it was his background in managing large concerts and events that inspired the development of the system. Creating a ‘broadcast center’ approach meant teachers could switch camera feeds to the appropriate student at the right time – just as a large arena would with multiple screens and cameras. Each student has learned how to log on to and use Zoom – from video conferencing facilities to annotating on their screen and logging into applications and group chat.

“This is more than real-time learning sessions; our new remote workforce and education system focuses heavily on engagement through teaching materials. One of the benefits of this platform is that we can automate educational templates and deliver them to the students straight away. We have reduced the opportunity for students to be distracted,” Commisso says.

Accelerating business growth

Creating a new type of virtual education platform for students requiring additional educational support has delivered significant ROI for CoreSenses.

Activating a virtual classroom model overnight and then fine-tuning this with the Citrix technologies accelerated business growth for CoreSenses. Before the global health crisis, it delivered its classes in person in its Sydney-based studio. Post-pandemic, it now supports a growing number of students across the country.

“We have doubled our student numbers, and crucially we have an elastic technology infrastructure that can maintain growth and support virtual learning situations based on student preferences or health-related office closures. Our goal is to expand the number of sessions we can concurrently host as the Citrix technology certainly can support continued innovation,” Commisso says.

“Implementing Citrix Virtual Apps and Desktops enabled us to increase our online engagement tools with students whenever we needed to. This highly robust management plane allowed us to put together full sessions with each student and introduce greater automation and productivity – no student is ever left waiting for a teacher even when the teacher is with another student.”

David Commisso
Director of Technology & Learning, CoreSenses

Collaborating for accelerated transformation

For Commisso, the technology rollout was more than transferring his capabilities from one industry to another. He managed the project remotely from Europe and the US.

“We can currently accommodate 15 students at one time in this new platform on each teachers’ PC. However, we plan to accommodate 30 students at once. I think the Citrix technology can do it,” he says.

“Commisso’s vision for CoreSenses was definitely ‘out of the box’. Com-X mapped his vision and built the architecture using Citrix Virtual Apps and Desktops and Citrix Gateway Enterprise with a unique approach. Commisso then extended things further by developing CoreSenses’ own bespoke control software and tablet app that controls session focus, microphones, muting, and webcams to individual teaching sessions with a simple tap of the tablet device. It’s incredibly teacher and student friendly,” says Laird.

“There are 100 sites educating children with similar needs, and they could benefit from this Citrix technology environment,” he concludes.

“It was great working with Com-X because it was very open to a project that was a little out of the ordinary. It understood from day one that we would benefit from innovating how Citrix Virtual Apps and Desktops could deliver a new concept.”

David Commisso
Director of Technology & Learning, CoreSenses



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